

USDA-SCS
Texas-Area 5
Section II-E
September 1976

ERODED BLACKLAND
RANGE SITE DESCRIPTION
PE-44-64

Land Resource Area BL
Location Dallas, Burleson, Denton,
McKinney and Farmersville
Date September 1976

1. TOPOGRAPHY AND ELEVATION: This site occurs as gently sloping to rolling hills. Slopes range from one to twenty percent, but are usually between five and twelve percent. The steeper part of the site rarely exceeds 300 feet in length. Elevation ranges from 300 to 550 feet.
2. SOILS:
 - a. Soils of the site are moderately deep to deep, dense, heavy, grayish brown or olive colored clays over shale. They are low in organic matter and a hard, thick crust forms readily. The soils are slowly permeable. Movement of moisture and air through them is slow and root growth is restricted. The soils give up moisture to plants grudgingly. The high clay content also causes the soil to crack severely when dry, doing extensive damage to plant roots. When the soil is bare, surface runoff is rapid and erosion is a hazard. Erosion has removed the surface soil from much of the area and gullies are common. These factors make the site very droughty. Re-establishment of native vegetation is difficult. Management of this site should be aimed at maintaining a good cover of growing plants and vegetative litter.
 - b. Some soil taxonomic units which characterize the site are:
Vertel clay
Ferris clay
 - c. Specific site location:

3. CLIMAX VEGETATION:

- a. In its pristine condition, this is a tall and mid grass prairie. Little bluestem and Indiangrass usually dominate the potential plant community, making up 50 percent or more of the total annual yield. Also occurring but with less frequency or in smaller amounts are big bluestem, Virginia and Canada wildrye, Florida paspalum, vine-mesquite, Texas wintergrass, silver bluestem, and tall dropseeds. Oak, elm, hackberry, and bumelia trees may occur along the water courses and widely scattered over the site. The site also grows a variety of forbs and legumes common to the Blackland Prairies.

RELATIVE PERCENTAGE					
Grasses	85%	Woody	5%	Forbs	10%
Little bluestem	40	Oak		Maximilian sunflower	
		Hackberry		Englemann daisy	
Indiangrass	25	Elm		Halfshrub sundrop	
Big bluestem		Bumelia	5	Penstemon	
		Hawthorne		Gayfeather	
Vine-mesquite		Coralberry		Blacksamson	
Sideoats grama		Elbowbush		Prairieclover	
Silver bluestem				Bundleflowers	10
Tall dropseeds	15			Sensitivebriar	
Texas wintergrass				Yellow neptunia	
Low panicums				Snoutbean	
				Wildbean	
Texas cupgrass				Vetch	
Slim & rough				Scurfpea	
tridens				Western indigo	
Virginia & Canada					
wildrye				Ragweed	
Buffalograss	5			Croton	
Sedges				Gaura	
Purple threeawn				Painbrush	
Low paspalums				Verbenas	
Plains lovegrass				Bluebonnets	
Florida paspalum				Scullcaps	
				Larkspur	T
				Winecups	
				Woolywhite	
				Snow-on-the-Prairie	
				Indian plantain	
				Prairieparsley	

- b. Silver bluestem, sideoats grama, tall dropseeds, Texas wintergrass, and unpalatable forbs are aggressive increasers on the site when the bluestems and their associates are grazed out.

In a continuously close grazed situation, buffalograss may increase to form an almost solid stand. In addition to buffalograss any or all of the following common invaders may be seen growing on the site in a deteriorated condition: Texas grama, hairy tridens, windmillgrass, tumblegrass, annuals, milkweed, queen's delight, and mesquite trees.

- c. Approximate total annual yield of the site in excellent condition ranges from 1500 to 4000 pounds of air-dry vegetation per acre, depending on rainfall and growing conditions.

4. WILDLIFE NATIVE TO THE SITE: Quail and dove inhabit this site. Deer are non-existent, or at least limited, on the site in climax condition because of the scarcity of cover. They do, however, graze the many palatable forbs on the fringes of the site from adjacent wooded sites. As range condition declines and woody plants increase and invade, the site becomes more habitable for deer.

5. GUIDE TO INITIAL STOCKING RATE:

a. <u>Condition Class</u>	Percent	<u>AC/AU/Yearlong</u>
	<u>Climax Vegetation</u>	
Excellent	76 - 100	12 - 15
Good	51 - 75	15 - 18
Fair	26 - 50	18 - 22
Poor	0 - 25	18+

- b. Introduced Species

	<u>Percent Ground Cover</u>			
	<u>100-76</u>	<u>75-51</u>	<u>50-26</u>	<u>25-0</u>
Common bermudagrass	10-12	12-16	16-24	24+
KR, Kleberg bluestem	10-12	12-18	18-26	26+

RELATIVE FORAGE QUALITY OF SPECIES 1/

a. Cattle

<u>Primary 2/</u>	<u>Secondary 3/</u>	<u>Low Value 4/</u>
Big bluestem	Sideoats grama	Hairy tridens
Indiangrass	Silver bluestem	Texas grama
Little bluestem	Tall dropseeds	Windmillgrass
Florida palpalum	Texas wintergrass	Tumblegrass
Virginia & Canada wildrye	Slim and rough tridens	Annuals
Vine-mesquite	Low panicums	Ragweeds
Texas cupgrass	and paspalums	Gaura
Maximilian sunflower	Perennial threeawns	Paintbrush
Englemann daisy	Buffalograss	Bluebonnets
Halshrub sundrop	Sedges	Verbenas
Penstemon	Prairieclover	Scullcups
Gayfeather	Bundleflower	Larkspur
Sensitivebriar	Yellow neptunia	Winecups
Snoutbean	Scurpea	Woollywhite
Wildbean	Western indigo	Snow-on-the- Prairie
Vetch	Blacksamson	Indian plantain
		Prairieparsley
		Woody plants

b. Quail and Dove 5/

<u>Primary</u>	<u>Secondary</u>	<u>Low Value</u>
Ragweeds	Prairieclover	Fuzzy seeded
Croton	Western indigo	grasses & forbs
Snow-on-the-Prairie	Scurfpea	Queen's delight
Partridgepea	Trailing wildbean	Mesquite
Sunflowers	Gaura	Osage orange
Bundleflowers		
Sensitivebriar		
Yellow neptunia		
Snoutbean		
Slickseed wildbean		
Vetch		
Panicum seeds		
Paspalum seeds		
Mast		

- 1/ This plant rating system gives guidance on animal preference for plant species as well as indicating competition between kinds of animals for various plants. Grazing preference does not necessarily reflect a plant's ecological place in the climax plant community. Grazing preferences change depending upon the animal; upon plant palatability and nutritive value, stage of growth, season of use, relative abundance, availability and plant associations.
- 2/ These species generally decrease under prolonged heavy grazing use.
- 3/ These plants usually increase initially, then decrease under prolonged heavy grazing use.
- 4/ These plants continue to increase with prolonged heavy grazing use.
- 5/ For these species the terms primary, secondary and low value indicates bird preference only. They do not indicate plant response to feeding pressure; nor do they have any ecological significance.

Approved by *[Signature]*
8/30/76
[Signature]
9/10/76